

**Permissive or Restrictive:
Is There a Need for a Paradigm Shift
in the Operational Use of the Fire
Support Coordination Line?**

**A Monograph
by
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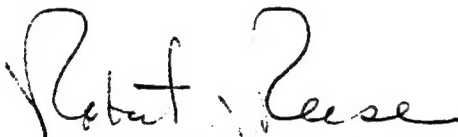
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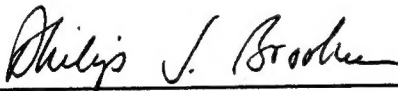
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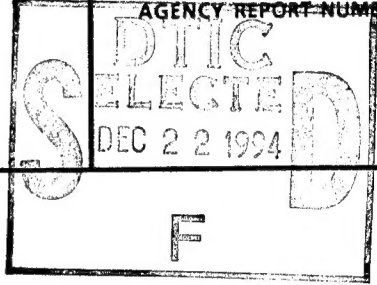


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ABSTRACT

PERMISSIVE OR RESTRICTIVE: IS THERE A NEED FOR A PARADIGM SHIFT IN THE OPERATIONAL USE OF THE FIRE SUPPORT COORDINATION LINE? by MAJ Stephen R. Lanza, USA, 62 pages.

Joint Chiefs of Staff (JCS) Pub 3.0, September 1993, defines the Fire Support Coordination Line (FSCL) as "a permissive fire support coordination measure." However, it also states that "forces attacking targets beyond the FSCL must inform all affected commander's in sufficient time to allow necessary reaction to avoid fratricide, both in the air and on the ground." This dichotomy of whether the FSCL is permissive or restrictive, or a combination of both, is not only a question at the operational level, but a highly emotional issue affecting the unity of effort between the services.

The purpose of this monograph is to determine whether the FSCL is adaptable and appropriate for current warfighting doctrine. This study focuses on a critical examination of the joint doctrine concerning the planning and implementation of the FSCL, and its related problems between the services. Whether the problem has been the inability to execute joint doctrine, or the inconsistency of the doctrine, severe repercussions are felt with respect to the FSCL. The tendency in lieu of resolving the problem is an unwillingness of all the services to adhere to the coordination required to implement the FSCL.

The methodology begins by examining the historical development and perspective of the FSCL from its inception as the 00 Bomb Line. Next, the study analyzes the relevance of the FSCL, the views and rivalries between the Army and the Air Force, and finally why these organizations resist change and the imminent problems that result. Using documents such as the Tait Report concluded at the end of the Gulf War and the lessons learned gathered by the J-7 JCS, this study reviews the impact in the inability of the FSCL to synchronize joint fires on the battlefield.

The monograph concludes that the difficulty of resolving the FSCL issue is that we have been looking for an individual solution to a problem that stems from different service cultures and doctrinal interpretations. Changes in technology and the evolution of the modern battlefield have made the FSCL as it is currently used anachronistic. Coordination measures such as the FSCL were initially designed to enhance combat operations. However, the FSCL and the necessity to force its use have overtaken the importance of joint interoperability. The use of a commonly accepted and defined forward boundary and the emerging role of the Joint Force Commander will ensure synchronization of actions in time, space, and purpose for the future battlefield.

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INTRODUCTION

"Government and cooperation are in all things the laws of life; anarchy and competition the laws of death."¹

John Ruskin Essay #3 1854

With the reduction of military forces following the end of the Cold War, the requirements for joint operations, while increasingly more important, are becoming harder to achieve. The emergence of modern doctrine to meet new developments both on the battlefield and in the political arena requires that the U.S. conduct operations for two or more major regional conflicts (MRC). These operations, conducted jointly among all the services, must attain quick decisive victory with minimal casualties.

Conflicts such as Just Cause and Desert Storm provide the realization that future battles will not be fought under the purview of one service. Joint Doctrine a product of the Goldwater-Nichols Act of 1986 was instrumental in stipulating we fight as a team.² However, doctrinal problems among the services, lack of coordination, and inherent cultural biases have made this difficult to achieve. The coordination of deep fires using the Fire Support Coordination Line (FSCL) is but one example of the problems encountered in conducting joint operations.

The intent of this monograph is to examine the FSCL and its application on the joint battlefield to determine if it enhances the synchronization of fires at the operational level of war and to demonstrate the problems inherent in joint Army-Air Force operations. This study consists of five sections. The first section states the problem and the background of the problem. It

addresses the significance of the study, and provides the structure and methodology, for the monograph. The second section traces the development of the FSCL from its inception as the 00 Bomb Line during Operation Cobra in World War II and analyzes the relevance of the FSCL on the modern battlefield. The third section examines the doctrinal view of the Army and the Air Force concerning the FSCL. This determines if the divergent view of the Army and Air Force about the FSCL have spawned a rivalry that focuses on control vice coordination. The fourth section examines lessons from the Gulf War and the Joint Universal Lessons Learned (JULLS) to identify problems that have occurred as a result of our inability to mesh the doctrinal intent of the FSCL with current warfighting doctrine. The fifth section addresses the dimensions of these problems and whether there is a need for a paradigm shift in the operational use of the FSCL.

SECTION 1: BACKGROUND OF THE PROBLEM

The FSCL is an integral doctrinal concept that is at the forefront of joint operations. Joint Publication 3.0 Doctrine for Joint Operations defines it as "a permissive fire support coordination measure."³ However, it also states that "forces attacking targets beyond the FSCL must inform all affected commanders in sufficient time to allow necessary reaction to avoid fratricide, both in the air and on the ground."⁴ This dichotomy of whether the FSCL is permissive or restrictive, or a combination of both is not only a significant question at the operational level, but a highly emotional issue affecting the unity of effort between the services.

The outgoing Chairman of the Joint Chiefs of Staff, GEN Colin Powell addressed the issue of the FSCL and its application in his Doctrinal Statement of Selected Joint Operational Concepts.⁵ The need for the Chairman to specifically address this issue may indicate a growing belief within the services that perhaps the FSCL is anachronistic and carries so much baggage that it has ceased to be effective. In many instances both in combat and in training, the use of the FSCL may have prevented the synchronization of fires and often resulted in a "turf battle" for control of assets, terrain, and command and control of the battlefield.⁶

Prior to today's rapid advancement in technology, the Army had a minimal impact on actions beyond the FSCL. At times, this was done intentionally by placing the FSCL at the maximum range of their indirect fire systems. This minimized the Army's ability to

influence actions beyond the FSCL and, in essence, delineated the battlefield between the Army and the Air Force. However, weapon systems such as the Army Tactical Missile System (ATACMS) and the new Army attack helicopter (AH-64), improved intelligence and targeting platforms such as the Joint Surveillance and Target Attack Radar System (JSTARS), and the expanding role of Special Operations Forces have given the Army greater incursions into the Joint Force Commander's (JFC) battlespace.

Prior to these technological advances the ground commander was comfortable with the FSCL defining the depth of his area of operations. This allowed the Air Force and the Navy to become the predominant players in the execution of operational fires with both believing they should have preeminence on the battlefield in the conduct of operational fires.⁷

Advances in technology have not only increased the lethality and mobility of battlefield systems, but have also increased the commander's area of operations. This has altered the normal division of responsibilities for attacking deep targets within the joint area of operations. As a result, the land component commander (LCC) can see deeper and engage deep targets at ranges previously considered for air interdiction (AI) only, which now requires the JFC to revise his guidance to include the synchronization of all interdiction assets on the battlefield. Consequently, the role of the FSCL as both a coordination and control measures between the Army and the Air Force has taken on greater importance on the battlefield.

Whether the problem is the inability to execute joint doctrine or the inconsistency of the doctrine, severe repercussions exist among the services with respect to the FSCL. In lieu of resolving the problem, the services were unwilling to conduct the coordination required to implement the FSCL.⁸ My research conducted with the Doctrine Department of the Air Combat Command (ACC), the J-7 (Joint Doctrine), Joint Chiefs of Staff (JCS), the Air Land Sea Agency (ALSA), and the Combined Doctrine Directorate (CDD) at Fort Sill, indicates that there are numerous interpretations of the "correct" procedure for the implementation of the FSCL.

While all these agencies agree that a problem exists, joint coordination between the services is often viewed as a loss of control of their various assets. Documentation such as the Tait Report and lessons learned on the execution of joint fires, the implementation of non-doctrinal measures to augment the use of the FSCL, and most recently the development of U.S. Central Command (USCENTCOM) Reg 525-24 reflect the doctrinal concerns on the role of the FSCL and the widening gulf between the services.

By addressing service parochialism and culture, the implementation of non-doctrinal measures, and doctrinal interpretation, this study examines whether the current doctrinal use of the FSCL by the Army and the Air Force enhances the synchronization of joint fires. The focus for this study will remain on the doctrinal role of the FSCL and not the ever present emotional issue of whose assets are the most relevant on the

battlefield. Failure to resolve the FSCL problem in the context of joint warfare will continue to exacerbate problems in the synchronization of joint fires on the battlefield.

If the FSCL is to become adaptable to current warfighting doctrine, the problems stated in this study need to be addressed in the context of a joint professional dialogue. This will serve to enhance combat readiness and negate the parochialism and the debate over roles and missions that occur when competition and control are substituted for coordination and cooperation.

SECTION 2: THE EVOLUTION AND RELEVANCE OF THE FSCL

Tracing the evolution of the FSCL enables us to fully understand the complexity and impact that doctrine has on this issue. Though the modern day definition of the FSCL has its roots in the inception of the 00 Bomb Line in World War II, the actual genesis of the FSCL occurred during World War I. The initial intent was to develop a system to deconflict the effect of fires to avoid fratricide rather than coordinates fires to enhance their effects (This view is still prevalent today).

During World War I, the British and French attempted to improve the coordination of artillery and the maneuver of infantry on the battlefield. This was established by a series of Phase Lines (PL) that delineated which side was safe for artillery to fire on and which side was safe for the infantry to maneuver in.⁹ This measure was the precursor to the modern day Coordinated Fire Line (CFL) which "is a line beyond which conventional surface-to-surface fires may be delivered within the zone of the establishing headquarters without additional coordination."¹⁰

The emergence of the airplane in World War I created coordination problems between air and ground forces. Due to the increased possibility of fratricide occurring due to pilots inadvertently bombing soldiers on the ground, innovations rapidly emerged during the conduct of battle.¹¹ These innovations represented the first measures to coordinate between the air and ground forces. They included the wearing of white panels by soldiers to identify their location, use of multi-colored flares,

and the creation of the Signal Corps by the Germans. These measures served as the tactics, techniques, and procedures (TTP) of the day for air and ground forces.¹² Command and control problems relegated the aircraft as primarily a system to spot ground forces and clear fires, and developed a mind-set of restrictive procedures to protect the soldiers on the ground.

The development of doctrine in World War II formed the basis of fire support doctrine that is still prevalent in today's procedures to expedite the use of the FSCL. In 1940, prior to the beginning of World War II, the development of doctrine to deconflict air and ground forces was further enhanced by the lessons learned from World War I. This was brought out in the 1940 version FM 6-20 Fire Support which stated that the use of zones of fire would assist in deconflicting fires on the battlefield.

By 1944, doctrine collocated the artillery liaison officers (LNO's) with the maneuver units to assist them in coordinating fires.¹³ From this doctrine concepts such as zones of fire and Joint Engagement Zones have emerged in our current Tactics, Techniques, and Procedures (TTP), while LNO's form the foundation for the Joint Targeting Coordination Board (JTCB). Both these issues are developed later in this paper.

The defining point in the evolution of the FSCL occurred on the beaches of Normandy and Sicily in World War II. During the six months before the Normandy invasion 33 U.S. divisions in England had not conducted joint air-ground training, and 21 divisions had not even seen an aircraft for the purpose of recognition in

battle.¹⁴ When the Army Air Corps was tasked to bomb the German lines to support the ground offensive, the inability to coordinate and synchronize the use of fires and maneuver contributed to 75 allied planes dropping bombs short of the enemy. This resulted in 601 soldiers wounded in action and 111 killed in action, to include LTG Leslie Mc Nair, the highest ranking American in theater.¹⁵

Additionally, anti-aircraft fire against the transports carrying the 504th Parachute Infantry Regiment in Sicily destroyed 23 aircraft and damaged 37 others.¹⁶

These problems were in part caused by the fact that the U.S. Army Air Corps entered World War II without the requisite doctrine to accomplish close air support (CAS). Specifically, doctrine did not provide for communication between the pilots and the ground forces.¹⁷ To compensate for this, ad hoc measures were established to coordinate and deconflict the use of airpower.

Operation Cobra exemplified the problem with the doctrinal control of CAS. During this operation, allied aircraft intending to bomb the German lines were told to fly parallel to the front lines to preclude fratricides. However, the airplanes attacked perpendicular over the allied lines causing numerous friendly casualties. Later GEN Bradley remarked: "the planes flew a course perpendicular to our lines rather than parallel to it as I had been assured they would. I have seldom been so angry. It was duplicity, a shocking breach of good faith."¹⁸ Before this operation, the separation between ground and air forces was fairly delineated on the battlefield. Yet the emergence of the role of

the aircraft was indicative of the potential problems that occur when technology begins to outpace the emergence of doctrine.

Men such as Major General "Pete" Quesada, Commander of the IX Tactical Air Command, attempted to bridge the widening gap that was developing between the air and ground forces. Realizing that doctrine did not provide for communication between the pilots and the ground forces, Quesada established Forward Air Controllers (FAC) with the maneuver elements, putting them on Sherman tanks. He also provided tactical air control parties (TACP) to provide liaison and coordinate with both air and ground operations.¹⁹

Based on these incidents, the Army Air Corps sought to gain institutional autonomy as an independent service at the end of World War II. To accomplish this, the Army Air Corps argued that its first priority was to gain air superiority, which set the stage for the interpretation of emerging doctrine as a clear delineation of control on the battlefield. With the Army's acquiescence, the Air Force would continue to interpret fire support coordination measures solely to control fires on the battlefield and to prevent the occurrence of fratricides.

By 1948, Field Manual 6-20, utilizing the lessons learned from World War II, put into doctrine measures such as the no-fire line and the 00 Bomb Line. Their intent was to prevent friendly casualties while assuring the requisite coordination for deconfliction between the Air Force and the Army. The use of the no-fire line was established by the ground commander to facilitate the use of artillery beyond that line without coordination. Short

of the line fires had to be approved through the ground commander.²⁰ The inception of this measure was purely to provide for the coordination of fires and was interpreted as a restrictive measure.

The use of the 00 Bomb Line continued throughout the 1950's as a method to delineate acquisition responsibility and the parameters of the deep and close fight between the corps and the division. As the modern precursor to the FSCL, it was required to be established along identifiable terrain and provided the Air Force an area where they could bomb without any coordination.²¹ In 1961 the modern day version of the FSCL was established in FM 6-20-1, Field Artillery Tactics. The term FSCL replaced the 00 Bomb Line. The FSCL was intended to be a no-fire line between corps and higher echelons and a bomb line for the ground and air forces. The corps commander was responsible for establishing it. The intent was to ensure coordination of fires outside of the corps which could affect the ground operation. The FSCL was to be easily recognizable both from the air and on a map.²²

By 1965 the definition had changed slightly stating that the appropriate ground commander must ensure coordination of fires not under his control but for those fires which could affect his tactical operation. Coordination for the establishment of the FSCL was required with the tactical air commander and other supporting elements.²³ The placement of the FSCL was normally at the maximum range of the indirect fire systems on the battlefield, which became an accepted practice between the Army and the Air Force.

The next step in the evolution of the FSCL resulted from the application of fire support doctrine to NATO war plans against the Warsaw Pact. Our relationship with members of NATO resulted in the creation of Standard NATO Agreements (STANAGS). By 1967, the FSCL had replaced the term "bomb line" in these STANAGS and the term "bomb line" was removed from the military lexicon. Two significant changes in the FSCL resulted from this revision. First, the FSCL was to be used for air, ground, and sea delivered munitions as well as nuclear weapons. Second, the FSCL was now to be placed as close to friendly troops as possible.²⁴ The intent was to provide a defined measure of protection for ground forces and expedite the use of fires on a greater portion of the battlefield. Prior to 1967 the Air Force had minimal involvement in the doctrinal definition of the FSCL. Depicting the battlefield in a linear fashion seemed to satisfy the interests of both the Air Force and the Army in terms of preventing fratricide and exploiting their weapon systems.

The Army made another significant change to the definition of the FSCL in 1977. It allowed the Air Force to use the FSCL to determine roles and missions on the battlefield. The definition no longer required the placing of the FSCL close to friendly ground forces. By stating that all air missions short of the FSCL were CAS and those beyond the FSCL were designated as AI, the FSCL separated CAS and AI on the battlefield.²⁵ This definition advocated control vice coordination in terms of how the FSCL was to be used on the battlefield and perpetuated the delineation of

responsibility between the services and the dichotomy that we have in the current joint definition.

Today, the services draw their definition of the FSCL from different sources. The Air Force adheres to the definition in Joint Pub 3.0, while the Army abides by the definition in the fire support manuals of the field artillery designating the FSCL as a permissive fire support coordination measure (FSCM). FM 6-20-30 Fire Support For Corps and Division Operations states:

The purpose of this permissive fire control measure is to allow the corps . . . to expeditiously attack targets of opportunity beyond the FSCL. The attack of targets beyond the FSCL by Army assets should be coordinated with supporting tactical air. . . informing and/or consulting with the supporting tactical air component. However, the inability to effect this coordination does not preclude the attack of targets beyond the FSCL.²⁶

This definition provides the framework for the use of the FSCL in Joint Pub 3.0.²⁷ With the advent of joint doctrine and the necessity to fight joint, the FSCL has taken on significant importance in the joint arena not only because of what the definition says, but also because of what can be inferred from it.

The definition of the FSCL in Joint Pub 3.0 is primarily the same as that in Army doctrine. However, some subtle differences are used in joint doctrine such as the ability of the appropriate land force commander to establish the FSCL. The doctrine also addresses the need to avoid fratricide both in the air and on the ground.²⁸ While the requirements for coordination are basically the same, Joint Pub 3.0 states: "supporting elements may attack targets beyond the FSCL, providing the attack will not produce adverse affects on, or to the rear of the line."²⁹ (The importance

of this becomes apparent in the Gulf War) Additionally, Joint Pub 3.0 stipulates the FSCL is not a boundary and that synchronization of operations on either side of the FSCL is the responsibility of the establishing commander out to the limit of the land force boundary.³⁰

The terminology used in Joint Pub 3.0 poses two significant problems. First, it is subject to interpretation and does not truly establish the FSCL as a permissive fire support coordination measure. It also provides enough ambiguity to enable the Air Force to substantiate a clear delineation of responsibility and control in terms of battlefield geometry.

Today, though the FSCL is defined as a permissive FSCM, its ambiguity and lack of specificity do not dissuade the Air Force from adhering to the 1977 interpretation of the FSCL. The inability to focus on the requisite coordination for the use of the FSCL forms the crux of the issue for the debate on the use of the FSCL. As both services struggle to come to grips with the mechanisms necessary to coordinate for the proper use of the FSCL, their divergent views have resulted in a lack of bi-partisan cooperation. The conflict of the joint battlespace between the Army and the Air force has contributed to a competitive atmosphere delineating the battlefield more so than was initially envisioned.

SECTION 3: INTER-SERVICE VIEWS AND RIVALRIES

"The money is short so we must think."³¹

Today our military is in transition. The public's demand for a quick, decisive victory with minimal casualties is at the forefront of our military strategy. Budget cuts, reductions in force structure, and the redefining of roles and missions in a changing world have caused the services to take a hard look at their future impact on the battlefield. Numerous documents, systems, and coordination measures such as the FSCL have now become the rallying cry for the services to support their position in terms of retaining their force structure, mission, and percentage of the defense budget.

The Army defines the FSCL issue as a coordination problem. Whereas the Air Force views it an issue of control beyond the FSCL. Both services advocate cooperation in the area of joint interoperability as mandated in the Goldwater-Nichols Act of 1986; however, the struggle over control has reached a new dimension as future roles and missions are defined. The use of the FSCL in particular is a measuring stick that is a symptom of a far larger problem, which is the need to develop measures to achieve the synergistic effects of operational fires.

The doctrinal definition of the FSCL as stated in Joint Pub 3.0 is broad enough to support the contentions of each of the services; unfortunately, the definition in Army doctrine is not consistent with joint doctrine. As examples, the upcoming draft of FM 101-5-1 Operational Terms and Symbols and the current FM 6-20-30

Fire Support for Division and Corps Operations use definitions that are not consistent with the one in Joint Pub 3.0. Additionally, AFM 1-1 Basic Aerospace Doctrine for the United States Air Force does not even address the FSCL.

Resolving the doctrinal inconsistencies between the services is greatly enhanced by accepting a common definition for the FSCL. Conversely, lack of acknowledgement by the services requires that for the purpose of this the definition of the FSCL is based on the one stated in Joint Pub 3.0. Though joint doctrine is often misapplied and misinterpreted in various manners, it serves as a critical point of departure. The joint definition of the FSCL states:

The FSCL is a permissive fire support coordinating measure established by appropriate land force commanders within their boundaries . . . Forces attacking targets beyond the FSCL must inform all affected commanders in sufficient time to allow necessary reaction to avoid fratricide, both in the air and on the ground. FSCLs facilitate the expeditious attack of targets . . . Supporting elements may attack targets beyond the FSCL provided the attack will not produce adverse effects on, or to the rear of the line. The FSCL is not a boundary . . . In exceptional circumstances, the inability to conduct this coordination will not preclude the attack of targets beyond the FSCL. (emphasis added)³²

The highlighted portions of this definition form the nexus of the disagreement between the Army and the Air Force. The service's view joint documents as political documents, hinging on every word and its context. In the Army's view, the FSCL is a permissive coordination measure that enhances the opportunity to deliver deep fires while minimizing or eliminating the time required to coordinate these fires. However, the Air Force views the same FSCL

as restrictive. They interpret the FSCL not as a coordination measure but specifically as a control measure that delineates battlefield responsibility between the services.

This definition was severely tested during Desert Storm. During the operation, the Air Force required the Army to coordinate all surface-to-surface fires beyond the FSCL with them and was the approving authority for them.³³ This conflicted with the Army's permissive view of the FSCL.

While acknowledging that fires can occur on either side of the FSCL (i.e. Air Interdiction), the Air Force clearly stipulates that fires beyond the FSCL are conducted under the control of the Joint Force Air Component Commander (JFACC).³⁴ This divergent view of the FSCL causes each service to consider the other's requirements as an intrusion into their battlespace.

Before analyzing the Army's and Air Force's views in more detail, it is first necessary to examine why this issue has recently grown in magnitude. Prior to Desert Storm, the FSCL had minimal impact on linking the tactical and operational battlefield. Due to the limited range of the Army's indirect fire systems (30 km for the Multiple Launcher Rocket System) and acquisition capability, the FSCL provided a satisfactory measure to delineate the battlefield between the Army and Air Force. It also provided a practical means of limiting the area of operations the corps commander was responsible for.³⁵

However, rapid advancements in technology such as JSTARS and ATACMS extended the corps commander's battlespace, defined by the

Army as "a physical volume that expands or contracts in relation to the ability to acquire and engage the enemy"³⁶ out to 150 km. As a result of this de-facto extension of the corps commander's battlespace, the ground commander can now extend the fight in near real time to a point on the battlefield that was previously reserved solely for the Air Force.

While the de-facto extension of the battlespace appears to benefit the Joint Force Commander, it threatens effective integration of deep fires through confusion about the doctrinal use of the FSCL. This confusion could also result in piecemeal and isolated employment of forces which would not present the enemy with the greatest dilemma possible. If the current use of the FSCL hinders technological enhancements, it can only get worse as weapon systems and ranges begin to approach 300 km.

Prior to these technological advancements, the Army appeared comfortable with the Air Force interpretation of the FSCL as the limit of the corps area of operations. This was in part due to the Army's positioning of the FSCL at the maximum range of their organic weapons, whose range and trajectory did not impact on the Air Force's mission.³⁹ Now with advanced technology, the Army is making a case for the Air Force to adhere to the FSCL as a coordination measure, when previously the Air Force was allowed to treat it as a control measure delineating separation of the battlefield.

As technology draws the various branches of the military together, the deep battle is no longer the domain of an individual

service, though each service often makes the case that they alone can achieve quick, decisive victory beyond the FSCL. Yet while technology can enhance coordination and reduce the fog of war, it can also increase the likelihood of fratricide because of our inability to control it.

The theater commanders have filled the doctrinal void with both positive and negative consequences. They and their staffs established additional procedures to eliminate the ambiguity in joint doctrine. The major combatant commands, Combined Forces Command, the European Command, and Central Command developed non-doctrinal measures such as the Deep Battle Support Line (DBSL), Reconnaissance Interdiction Phase Line (RIPL), and the Long Range Interdiction Line (LRIL) to resolve the joint problem with the FSCL (See Appendix A for a description of these measures). These individual ad hoc solutions combined with overlapping service capabilities can only enlarge the existing schism between the services.

Whether it is a permissive or restrictive measure, the ongoing debate over the FSCL has ended the Army's concept of "fire and forget" which has been prevalent on the battlefield. Prior to Desert Storm, neither service pushed for coordination of fires beyond the FSCL. This view was analogous to an antiquated artillery procedure of "silence is consent" for the clearance of fires short of the FSCL which is no longer valid.

Today, due to advances in technology and the doctrinal concept of simultaneity and depth, all fires must be coordinated on the

battlefield. This requires a significant shift in the paradigm of the culture of the ground and air forces. However, before the services can change the paradigm, they must first understand the particular view that each of their counterparts has on this volatile issue.

The View of the Army

The Army viewed the victory in the Gulf War as validation of their Airland Battle doctrine.⁴⁰ However, the wielding of centralized control of the airspace during the Gulf War by LTG Charles Horner, the Joint Forces Air Component Commander (JFACC), invoked a measure of suspicion and hostility from the other services. The fear, especially in the Army, was that the Air Force would try to dominate all aerial warfare at the expense of support for ground operations.⁴¹ The Army viewed this as a possible loss of responsiveness of CAS and AI. The FSCL, as it stands in terms of its definition and application, is symbolic of this fight for control of the battlefield.

Surprisingly enough, the Army maintains they are not at war with the Air Force over the FSCL. In fact, the idea of one service as more important or more decisive than the other in combat is an anathema to the Army.⁴² Recognizing that success in future conflicts is predicated on the ability to conduct operations in greater depth, the Army is seeking to expand coordination through the digitization of the battlefield. As the Army seeks to develop a digitized division by 1998, coordination among the services is the crux of future joint operations. The use of the FSCL in future

joint operations represents the Army's future vision for coordination on the battlefield.

As mentioned earlier, the theater commanders have temporarily rectified the problem with the FSCL by recognizing the addition of non-doctrinal control measures that further delineate the battlefield. These terms are used in lieu of a common and accepted definition. Thus, while advocating coordination vice control by the Air Force, the Army applies these non-doctrinal measures to expand its notion of control on the battlefield by increasing its battlespace. Measures such as the RIPL, DBSL, and LRIL established by different headquarters solely for that area of operation actually muddy the waters in terms of coordination between the Army and the Air Force rather than alleviate the problem.

The doctrinal focus of the Army has been tactical operations. The importance of the FSCL was paramount for the Army who viewed warfighting at the corps level and below, though they recognized operations at echelons above corps.⁴³ The use of the FSCL in accordance with the doctrinal definition advocated by the Army facilitates success at the tactical level by allowing the corps to expand their area of operations to shape the battlefield.

The Army is now advancing its doctrine as a mechanism to gain greater control of the joint battlefield by extending its tactical battlespace into the operational realm of the Air Force. Terminology such as battlespace enhances the expansion of the roles and missions of the Army in light of current events and stakes out the Army's interest in the contested area of joint doctrine.

Present air theorists like Price Bingham believe the Army would limit the dimensions of their operations if this did not occur. They see the land offensive as only a fight of committed forces.⁴⁴

Based on technological developments and new roles and missions, the Army is no longer content to wait for the enemy, but now wants to attack the enemy's center of gravity and divest him of his ability to fight. Rather than depending on the right weather, timing, and aircraft available, technology has extended the corps commander's area of operations to the point where the enemy at 150 km (well beyond the FSCL) is a perceived threat.⁴⁵

The area that had been previously been reserved for the Air Force in terms of operational fires is now open to the Army. Systems such as ATACMS with a range of 150 km and a response time of seven minutes (The Army believed the rigid ATO cycle hindered their response in Desert Storm), the AH-64 with a radius of 150 km and a loiter time of 20 minutes, JSTARS with a 150 x 150 km view of the battlefield, and the Unmanned Aerial Vehicle (UAV) with acquisition capability out to 300 km enable the Army to expand their battlespace. This expansion by the Army is often perceived at the detriment of the Air Force.

The importance of these developments is not lost on senior Army leaders. They view losing control of these systems beyond the FSCL to the JFACC as a relinquishment of control of the Army's combat power.⁴⁶ Additionally, senior Army commanders view the role of the JFACC as inappropriate to control the prioritization of their targeting. This view is echoed by many elements within the

Army. One such example is the XVIII Airborne Corps during Desert Storm who viewed the FSCL as a permissive measure requiring no coordination to fire beyond it. This conflicted with the Air Force interpretation of requiring coordination for all surface-to-surface fires beyond the FSCL.⁴⁷ The Army's current view of the FSCL poses a problem for the Air Force who is now told to observe the doctrinal definition of the FSCL which has not been adhered to in the past.

The Army may have exacerbated this problem which is paramount in our warfighting doctrine today. Prior to new technological developments, the Army placed the FSCL at the maximum range of its artillery. The Air Force was allowed to interpret this as a boundary and the limit of the Army's organic firepower.⁴⁸ Land beyond the FSCL was the responsibility of the Air Force. Both services were comfortable with this delineation of the battlefield and the area beyond the FSCL was allowed to develop into an unconstrained weapons employment area for the Air Force. It is this paradigm that the Army is trying to change.

The View of the Air Force

Desert Storm may have expanded the doctrinal gap between the services by clearly delineating the battlefield and allowing the JFACC to control all fires beyond the FSCL. This interpretation of the FSCL allowed the Air Force to execute independent missions under its own command and control.⁴⁹ The ability to conduct these missions required rigid control of indirect fires which was aided by a strict adherence to the FSCL. This Air Force view connotes a

linear battlefield predicated on battlefield geometry which provides the means to delineate responsibility between the services.

Consequently, the Air Force view on the FSCL is not based on Desert Storm but is rooted in their service culture. This can be traced back to the aspiration of the U.S. Army Air Corps to gain institutional autonomy as an independent service after WW II.⁵⁰ From this separation, the Air Force developed its mindset of killing the enemy before he could get to the ground forces, which is the mantle of the Air Combat Command (ACC). As this culture evolved, the tendency to conduct centralized planning and decentralized execution to provide greater service autonomy developed as the cornerstone of Air Force doctrine.

Doctrinally the Air Force views the Army as a tactical fighting force.⁵¹ The Air Force bases its doctrine as an operational and strategic force on control of the aerospace environment and the control of aerospace power. Air Force Manual 1-1 defines the aerospace environment as "the entire expanse above the earth's surface . . . without lateral boundaries."⁵² Based on this doctrine and its roles and missions, the Air Force views itself as a force prepared to conduct operational missions. In contrast, the Air Force views the Army as a tactical force, whose missions and training are oriented towards the corps and below.

The view held by the Air Force drives the ACC and air commands around the world to see the problem with the FSCL as theoretical, resulting from misinterpretations of joint doctrine. As the expert

in air warfare, the Air Force believes the FSCL defines the intersection of service doctrinal views. Subscribing to the view that airpower saves the lives of ground soldiers, the Air Force maintains it has the command, control and communications to control fires beyond the FSCL. The Air Force views the ability to control fires beyond the FSCL as a means to maintain unity of effort and apply economy of force on the battlefield rather than sacrificing resources out of expediency.⁵³

Prior to the development of longer range Army systems, the Air Force had been content to allow the Army to establish the parameters for the FSCL. The placement of the FSCL at the maximum range of the Army organic weapon systems provided the Air Force the delineation of the battlefield they sought to support their concept. However, the Air Force is now reluctant to see a bold shift in the FSCL based on the desire of the Army to fight in greater depth. The Army's push for greater depth would not only decrease their responsiveness in terms of clearance of fires, but increase the risk of fratricide on the battlefield.⁵⁴ The sensitivity to fratricides is well-documented. By placing the FSCL at ranges that coincide with ATACMS, the Air Force loses the buffer they are used to working with.

The Air Force also sees this conceptual change in the FSCL as a threat to their centralized approach to the employment of deep fires. The centralized approach held by the Air Force chain of command is reinforced by most airmen who feel that the Army's view of a permissive FSCL implies acceptance of uncoordinated fires.

This outlook is especially true when fires must be coordinated beyond the FSCL but can be fired without coordination under the "exceptional circumstances" mentioned in Joint Pub 3.0. The Air Force sees this concept as unacceptable and flawed politically, economically, morally, and militarily.⁵⁵

The placing of the FSCL at the maximum range of the Army's organic weapon systems has been an accepted practice. The Air Force views the continual placement of the FSCL at the maximum range of ATACMS as fostering needless coordination and accepting the possibility of duplication of effort on the battlefield. Lack of coordination on the placement of the FSCL also runs counter to the fact that Joint Pub 3.0 now allows the JFC to task the JFACC to be a supported commander to conduct direct attacks against enemy centers of gravity. Doctrinal improprieties in the placement of the FSCL can only hinder the Air Force from accomplishing their strategic and operational missions and negate the possibility of the Army acting in a supporting role to support the JFACC.

Sensing that the Army is attempting to extend its control of the battlefield, the Air Force vehemently argues that the Army does not apply the FSCL at the operational level. The ACC continually states that the Army is satisfied with placing it based on their tactical needs and this creates a sanctuary for the enemy.⁵⁶ If the concern of the Army is that they will not receive support from the Air Force, the Air Force is adamant that part of their mission as defined in doctrine is the support of the land forces.

If the Army would adhere to the requirements of ranking target priorities and deconflicting competing target requests (which did not occur in Desert Storm), it would preclude the JFACC from reordering competing target nominations.⁵⁷ The Army would then feel that the Air Force is supporting the ground component and the point of contention becomes moot. This would aid in minimizing the coordination problems associated with the FSCL.

The Air Force Chief of Staff General Merrill McPeak has attempted to diffuse the debate over the FSCL by stating that the Air Force does not want a doctrinal mission gap on the battlefield. In McPeak's view, the FSCL "is not a mission line."⁵⁸ This view while admirable, fails to address the coordination required to prevent a mission line from developing. Additionally, it also minimizes the doctrinal debate that is ongoing between the Army's TRADOC and the ACC of the Air Force.

The prominent view by the operators in the Air Force is that the FSCL is still a viable concept that delineates responsibility. What has worked in the past is now an accepted practice. This view extends out to those who feel that the JFACC must act in the same manner as a maneuver commander and synchronize all assets beyond the FSCL.⁵⁹ Like their counterparts in the Army, their view on the FSCL does not address the requisite coordination to account for the divergent beliefs between the services.

Different lenses of each service lead to a different perspective which fuels service parochialism and inter-service rivalry. The Army's view of the FSCL, though interpreted as narrow

and constricted, focuses on short term problems. The Air Force exhibit a broader view based on the aerospace environment that they interpret as less constrained and restricted only by technology and human endurance.⁶⁰ Both services must understand how the other operates in their medium to forge a measure of joint interoperability on the battlefield.

Neither service is comfortable with changing the definition of the FSCL since each can interpret it differently. Consequently, this only reinforces each of their views on how the battlefield should be controlled and minimizes the joint interoperability that is preached but not adhered to.

The services divergent views on the FSCL appear rooted in a battle to control the future of joint fires. Their inability to resolve the problem of the FSCL hinders the joint interoperability required for the synergistic effects of joint fires. A close examination by each service of their existing paradigm regarding the FSCL, and the possibility of redefining it, may be the necessary departure point to resolve the employment of the FSCL on the battlefield.

SECTION 4: PROBLEMS ON THE BATTLEFIELD

The divergent views on the FSCL and its relevance on the future battlefield indicate that the issue as it currently stands cannot be resolved. The use of non-doctrinal and ad hoc measures to resolve the problem have only complicated matters, leading one to believe that there may be too much baggage associated with the FSCL. Until the services begin to try to establish a professional dialogue to correct the problems and numerous interpretations associated with the FSCL, difficulties such as the ones experienced in the Gulf War will continue to occur. Establishing a common definition and terminology among the services is the first step in providing a meaningful solution to the problem. Consequently, the use of the FSCL as a tool to assist the JFC in shaping the battlefield needs to be reevaluated.

The failure of the Army and the Air Force to resolve service parochialism derived from their unique cultures has detracted from the FSCL's ability to enhance joint operations.⁶¹ This is magnified when the strict geometric control measures that are currently used are not valid on the emerging non-linear battlefield.⁶² The emergence of the non-linear battlefield and technological advances that allow targets near the FSCL to have a near-term effect on the land battle preclude the geometric delineation of the battlefield.⁶³ Analyzing lessons learned from the Gulf War provides further insight on our capabilities to fight as a joint force. In examining the conduct of joint fires in Desert Storm, our inability to mesh the doctrinal intent of the

FSCL with the services warfighting doctrine poses recurring dilemmas for joint operations.

The FSCL Role in the Gulf War

The Gulf War provided the catalyst needed to bring out the problems between the Army and the Air Force on the utilization of the FSCL. The inability of the two services to coordinate and implement commonly understood joint fire support doctrine caused significant problems, particularly at the echelon above corps level. These problems appear to have stemmed from a parochial interpretation of fire support coordination measures (FSCM). This not only hampered the delivery of joint fires but substantially contributed to the belief between the services that they could not depend on the other for support.⁶⁴

The Tait Report headed by an Army major general, examined the problems and lessons learned from the Gulf War.* The report examined the authority to establish the FSCL, the need for standardized and timely reporting procedures to manage the FSCL, the use of non-doctrinal ad hoc measures, and the interpretation of the FSCL as a permissive vice restrictive coordination measure. This portrays the FSCL as an individual FSCM indicative of the battle between the Army and the Air Force to control the execution of deep fires on the battlefield.⁶⁵

The report stated that the Third Army headquarters was

* A critical part of this report indicated that the use of the FSCL was a problem not only among the services, but within the different levels of each service. This is symptomatic of a far larger problem to coordinate and execute joint fires.

intended to serve as an operational fires planning headquarters for the Army to minimize the confusion between the Army and the Air Force. However, the headquarters was not staffed and resourced to function as a field army or act as a warfighting headquarters. This resulted in additional friction between the corps, the Air Force, and the joint headquarters. This occurred since FSCLs were not coordinated with adjacent units and were forwarded with UTM grid coordinates which had to be converted to Longitude/Latitude for use by the Air Force.⁶⁶

Traditionally, within the Army, the FSCL had been a corps-level measure. However, Joint Pub 3.0 stated that the FSCL is established "by the appropriate ground commander to ensure coordination for fire not under his control, but for those which may effect current tactical operations."⁶⁷ This interpretation by the various ground commander's in the Gulf War resulted in the establishment of multiple FSCLs due to the inability of the Army to coordinate them at echelons above corps (EAC). At times, there were seven FSCLs established within theater forcing the joint headquarters to establish one theater FSCL.⁶⁸ Lack of an Army deep operations cell at EAC hindered the coordination for establishing the FSCL and contributed to lack of target priorities, duplicity, and last minute changes in nominations to the Air Force.⁶⁹

The FSCL was consistently moved farther out by the ground commanders due to a breakdown of flexible response between ground operations and airspace control. This occurred due to the perceived slow response of the Air Force target planning and

execution system to the changing situation of the ground forces. Additionally, lack of training in the joint control of airspace in peacetime severely contributed to this breakdown in FSCL management.⁷⁰

The use of the RIPL, another control measure placed beyond the FSCL at echelons above corps (EAC) was viewed as a solution to the control of fires.⁷¹ Designed to serve as a division of labor between corps and Third Army deep operations, the intent was to give corps commanders responsibility for targeting short of the RIPL, while EAC had responsibility beyond it. In the Army's view the RIPL was not intended to function as a FSCM; unfortunately, these procedures were not adhered to. The Air Force interpreted the area beyond the RIPL as "Air Force territory."

The Air Force viewed the use of this non-doctrinal measure as a means to modify the definitions of the no-fire area and free-fire area to meet their needs.⁷² The Air Force was then able to eliminate the doctrinal use of these coordination measures and create additional ad hoc measures such as "kill boxes". This allowed the Air Force to engage targets at will which did not coincide with the Army corps commander's priorities.⁷³

The disagreement on whether the FSCL was a permissive or restrictive coordination measure delayed fires beyond the FSCL. The Army's interpretation of coordination as "informing" vice the Air Force interpretation of it as "clearing fires" created confusion on the battlefield.⁷⁴

The Army quickly recognized the Air Force dilemma when the Marine Corps fired across their boundary beyond the established Army corps FSCL. Citing Joint Pub 1.02, the Marines interpreted the FSCL as authority to fire beyond it irrespective of boundaries or coordination. Conversely, the Army citing their own doctrine in FM 101-5-1 stated that while "subordinate" elements could fire beyond the FSCL irrespective of boundaries, this did not apply to adjacent units not subordinate to the corps.⁷⁵

Acknowledging problems in coordinating joint fires, the services via their doctrinal agencies (TRADOC and ACC) have sought to rectify the problems that occurred in the Gulf War. However, rather than examining current doctrine and procedures for joint coordination, the services, based on their parochial slant, advocate existing systems they are comfortable with when addressing these problems.⁷⁶ The Army advocates resolving the problem by expanding the role of the Joint Targeting Coordination Board (JTCB), while the Air Force views expanding the role of the JFACC as the solution.

The Role of the JTCB and the JFACC

Joint doctrine while addressing both the JTCB and the JFACC is still unclear in specifically defining their roles to control the JFC's deep fight. While the Army is comfortable with the JTCB concept in Joint Pub 3.0 as an extension of their service doctrine in FM 6-20-10, the Air Force views the JFACC which is specifically addressed in Joint Pub 3.0, as support for their doctrine in AFM 1-1. Therefore, each service is left free to interpret the

functional role of these organizations as they wish, which is essentially the same problem we have with the FSCL.

The use of the JTCB, while not mandated in Joint Pub 3.0, is encouraged.⁷⁷ The Army views this as an opportunity to review target information, develop targeting guidance, and to set priorities.⁷⁸ In this manner, the Army sees itself as the central player in the targeting function during complex or sustained operations. Since the director of the JTCB is normally the deputy JFC or the J-3, the Army believes that the control of the JFC's deep fight, to include the possible recommendation of apportionment to the JFC, rests in their purview.⁷⁹

Sensing that the Army intends to resolve the issue of the FSCL and joint fires with the JTCB, the Air Force sees this as an encroachment on their authority. The function of the JTCB must be kept at a macro vice micro level to preclude "targeting by committee" which the Air Force views as a recipe for disaster.⁸⁰

If a JTCB is designated, the Air Force wants it under the control of the JFACC to augment air operations.

Conversely, the Air Force envisions the JFACC controlling the JFC's deep fight as it did in the Gulf War. Since joint doctrine specifically addresses the role of the JFACC in accordance with AFM 1-1, the Air Force feels the JFACC can function as the JTCB.⁸¹ Having the preponderance of assets and capabilities, in the view of the ACC, enables the JFACC to be the central planner for joint targeting as well as have the primary responsibility for its execution.

The Army disagrees with the Air Force's assessment of the JFACC. Their view is that the JFACC is normally only the supported commander for counterair operations for attacking the enemy's strategic center of gravity.⁸² The Army uses Joint Pub 3.0 to corroborate their position by stating that "the supported force will have the authority to exercise general direction of the supporting effort."⁸³ Therefore, the Army does not believe the FSCL is the limit of their area of operations which counters the Air Force's belief (which the Army has supported in the past) that the FSCL delineated the battlefield.

These divergent views will not support a resolution of the FSCL issue. The dichotomy on the role of the JTCCB and the JFACC and the inability to coordinate joint fires in Desert Storm only exacerbate the inter-service concern with the FSCL. The FSCL issue will be resolved only when joint doctrine recognizes the Army's and Air Force's opposing views of joint battlespace and acknowledges the role of the FSCL in symbolizing that fight.

Resolving the Problem

The breakup of the Warsaw Pact, combined with increasing technological developments and the emergence of the non-linear battlefield, necessitated that the services break some longstanding paradigms. This is especially true of the FSCL whose validity, as it appears in our doctrine, has been surpassed by the changes in battlefield geometry. General Franks, the TRADOC commander, contends: "we are all tripped up over procedures and past paradigms."⁸⁴ Until the individual services resolve the

inadequacies in our joint doctrine, they will never be able to coordinate effectively on the battlefield.

The doctrine on joint fire support and specifically the FSCL is written based on old technology as opposed to current systems such as JSTARS. Technology has now given us capabilities that far outstrip the old procedures that were essentially developed in WW II. Breaking the pattern requires a concerted effort by both services to move away from the existing procedure of, "What do you want Army?" "Okay, nominate a target and send it up for approval" and if the JFACC says, "Okay, we'll hit it" the realization that it may be too late to engage the target effectively.⁸⁵

Resolving the doctrinal issues that impede coordination is dependent on coherent and executable doctrine devoid of interpretation. Both services must recognize that the mechanism to resolve the FSCL issue is not based on deriving additional non-doctrinal measures or implying that one service has more assets than the other. Each service must change their view of who controls the battlespace and focus on massing the effects of weapons vice the particular forces of each service.

This is of particular importance to the Army based on their doctrine that deep operations can be decisive.⁸⁶ Therefore, it is not imperative that the Army seek to determine how they can be the decisive arm of combat for the JFC. Rather, as the capabilities of modern technology expand, the heightened focus on roles and missions driven by declining budget dollars must give way to the requirements to train and fight as a joint force. This begins by

basing the coordination for joint fires and the role of the FSCL on a coherent understood joint doctrine that is devoid of service interpretation and rivalry.

In order to accomplish this some serious questions need to be addressed by the services. They must determine if the FSCL is a joint measure or an Army measure and whether it is always required on the battlefield. If the FSCL is a permissive measure as stipulated in doctrine, does it apply to both the Army and the Air Force? If doctrine requires us to coordinate beyond the FSCL, what is the mechanism to do this, and who is in the best position to coordinate it? Finally as synchronization becomes the driving force on the battlefield, does the Army believe that it can allow non-synchronized fires beyond the FSCL?

If a professional dialogue cannot resolve these issues (as is the case today), then the services will spend an inordinate amount time seeking ad hoc solutions to joint doctrine. When this occurs it invalidates the "accepted" doctrine and fosters further parochialism among the services. However, the resolution of these questions can lead to a universally accepted definition of the FSCL that enhances the services ability to execute simultaneously and in depth.

Once the definition is established in Joint Pub 3.0 it becomes the joint definition for the FSCL. All subsequent service publications to include FM 100-15 Corps Operations and the Artillery 6 series manuals must use that definition.⁸⁷ This also requires the Air Force to incorporate this definition in AFM 1-1.

The services and theater commanders must then remove all non-doctrinal and ad-hoc coordination measures that have been used in conjunction with the FSCL. The recommended joint solution is that the JFC designate a forward boundary that defines the limit of the ground component commander's deep fight.⁸⁸ This requires a recommended addition to the definition of a boundary as it appears in JCS Pub 1.02. The addition would state that boundaries do not define targeting interests. Units can and should nominate targets, regardless of boundaries, which may effect their mission accomplishment or future operations.⁸⁹

The combination of a joint FSCL and the use of a forward boundary resolves the battlefield geometry problem and minimizes the friction that results from an unclear delineation of the battlefield. Other doctrinal publications must reflect these new changes and incorporate them to reduce future interpretation problems.

Several changes must occur to minimize the friction resulting from doctrinal inconsistencies. Joint Pub 3.09 Doctrine for Joint Fire Support, FM 6-20 Fire Support Operations, FM 100-7 The Army in Theater Operations, and FM 100-15 must discuss procedures for establishing an FSCL and the coordination of operations beyond it. These manuals must also address the concept of high tempo maneuver and its impact on the placement of the FSCL as well as the requirements for forces not under the land component commanders control. Finally, these manuals must discuss the meaning of "are controlled by" to resolve how the coordination for the attacks

beyond the FSCL occur.

Two other significant changes must also occur. First, the accepted joint definition of the FSCL in Joint Pub 3.0 must omit the phrase "in exceptional circumstances, the inability to conduct coordination will not preclude the attack of targets beyond the FSCL."⁹⁰ This phrase is subject to misinterpretation that uncoordinated and unsynchronized fires are accepted on the battlefield. Finally, doctrine must define "coordination" within the land and naval components area of operations and address the planning and coordination for subsequent FSCLs and the impact on the current ATO.⁹¹

By resolving the doctrinal inconsistencies concerning the FSCL, we can establish a common base that enhances coordination and execution among the services. Without agreement on what constitutes accepted doctrine, the opportunity continues to exist for each service to derive measures that support their individual capability to conduct battlefield operations. If this is allowed to occur, it will substantially reduce our effectiveness on the battlefield and impact on the capability to simultaneously employ joint forces on the battlefield.

SECTION 5: CONCLUSION

The difficulty in the resolving the FSCL conflict is that each service has been looking for an individual ad hoc, non-doctrinal solutions to a problem that stems from their unique service cultures and doctrinal interpretations. These and other factors produce individual service parochialism, which often takes precedence over the joint interests of our defense policy and are not new to the military or this country. Secretary of Defense, William Perry, characterized this view as the Under Secretary of Defense in the Carter administration stating:

The system is simply out of balance between service interests and joint interests. Because of the way it is set up there is a basic, built-in conflict of interest between the role of the JCS members and the role of the service chiefs. Indeed it was deliberately designed that way to protect parochial service interests even at the expense of the joint interests of the Nation, the President, the Congress, and the Department of Defense.⁹²

The FSCL symbolizes this fight as the services compete to control the joint deep battle.⁹³ The key to minimize the fight to control the deep battle is to develop an accepted joint doctrine that enhances battlefield operations and does not provide the precipice for additional service rivalry and parochialism that could deter execution as exhibited in Desert Storm.

As our military redefines roles and missions based on technology and declining budgets it will be called to fight on battlefields that do not exhibit the linear geometry we have grown comfortable with. The doctrinal definition of the FSCL in Joint Pub 3.0 must reflect the changing scope of the non-linear battlefield. Additionally, Joint Pub 3.0 must recognize the

expansiveness of each service's battlespace and provide a doctrinal base that will not hinder the conduct of operations in both the tactical and operational areas of the battlefield.

Based on the analysis in this study, the current joint definition of the FSCL as stated in Joint Pub 3.0 does not enhance the synchronization of combat operations on the joint battlefield. Instead, its lack of clarity enables the individual services to interpret it to suit their own needs. This has resulted in a severe lack of coordination for the execution of deep fires. The use of non-doctrinal and ad hoc measures to resolve this issue has only exacerbated the problem of executing operational fires.

The development of an accepted doctrinal FSCL whose purpose on the battlefield is agreed to by the services, combined with a forward boundary for the ground forces, can alleviate the perceived notion of territorial intrusion and lack of service support. However, the capability to execute doctrine is only as strong as the commander who enforces its use in the execution of combat operations.

Therefore, the role of the JFC now becomes paramount in ensuring joint interoperability on the battlefield. Like his predecessors such as Eisenhower and MacArthur, the JFC must attempt to fill that role and become a true joint commander and not allowing parochialism to hinder his operation. With respect to the component commanders and agencies such as the JTCCB and JFACC, the JFC has the final authority to organize his forces as he deems necessary.⁹⁴

Joint doctrine provides the JFC a mechanism to resolve the conflict between the Army and Air Force components. Adhering to doctrine in Joint Pub 3.0, the JFC can "use lateral, rear, and forward boundaries to define AOs for land and naval forces, . . . to enable them to accomplish their mission while protecting deployed forces."⁹⁵ If the JFC uses a forward boundary, and if he approves the FSCL, he can balance the needs of the land component commander with the capabilities of the JFACC.

Actions on today's battlefield are joint operations. They are no longer the purview of one service. Simple delineation of the battlefield by the services using a linear model no longer contributes to the synergy of the joint force. Establishing a common accepted definition of the FSCL in conjunction with a forward LCC boundary will ensure synchronization of actions in time, space, and purpose needed to win the next battle.

Changes in technology and the evolution of the modern battlefield have made the FSCL as it is currently used anachronistic. Coordination measures such as the FSCL were initially designed to enhance combat operations. However, the FSCL and the necessity to make it work have overtaken the importance of ensuring joint interoperability. Reevaluating the use of the FSCL and its applicability on today's battlefield is a necessity if the services are to break the existing paradigms on joint operations.

APPENDIX A

Reconnaissance Interdiction Phase Line

The RIPL was initiated by the Allied Air Forces Central Europe (AAFCE) in Manual 80-2 Offensive Air Support on 30 June 1990. The RIPL was designed as a planning line to separate armies of the Warsaw Pact. Army Groups within the theater established it approximately 80 to 100 km from the forward line of troops (FLOT), the intent was to enable corps commanders to have prime responsibility for nominating targets which had a direct bearing on the land battle.⁹⁶

As a measure to complement and enhance the use of the FSCL, the RIPL has been exposed to numerous problems especially when applied outside the European theater of operations. These problems question the relevance of a control measure designed for defensive operations against a Warsaw Pact threat and the ability of NATO to adapt to new threats on a non-linear battlefield.

Additionally, the definition does not specify whether the RIPL acts as a boundary, who approves it, or whether more than one can be used. Most importantly the definition does not specifically identify who controls fires beyond and short of the RIPL.

Deep Battle Synchronization Line

The DBSL is a boundary approved by the Commander in Chief, Combined Forces Command (Korea) to delineate responsibility and synchronize fires of air - ground - and sea launched weapons against targets that fall within the deep battle area. With the approval of the Air Component Commander, naval and land forces may

attack targets beyond the DBSL.⁹⁷

As with the RIPL, problems arise with the use of the DBSL in conjunction with the FSCL. While the doctrine establishes the DBSL as a boundary, questions arise as to whether the DBSL is a boundary as specified in Joint Pub 3.0. Though designed to enhance coordination, the definition does not define the coordinating authority who is given responsibility between the FSCL and the DBSL. The lack of a coordinating authority between the FSCL and the DBSL causes a problem since the ACC has responsibility to coordinate the battle between the FSCL and the DBSL, but cannot control the battle which would give him the authority to compel agreements among the services.⁹⁸ Finally, the doctrine does not specify who approves the FSCL within theater adding to the confusion of coordination vice control.

Long Range Interdiction Line

Perhaps the foremost non-doctrinal term to aid in the control and coordination of fires beyond the FSCL is the LRIL. The LRIL is a phase line recommended by the Land Component commander (LCC) and approved by the JFC, to denote the extent of the LCC targeting responsibility. Targeting beyond the LRIL is the responsibility of the JFACC. The LCC may nominate targets beyond the LRIL but prior to attacking targets beyond the LRIL all components must coordinate with the JFACC.⁹⁹

The LRIL appears to act as a boundary, yet the definition does not specify whether the LRIL is a boundary or a fire support coordination measure. In some operational situations, it may be

more advantageous to use a boundary instead of the LRIL. This is critical if the corps commander's area of operations extends beyond the LRIL, or if he wishes to plan operations beyond the LRIL. Finally, the definition does not address the problems concerning the impact of multiple FSCLs (as occurred in Desert Storm) and the problems of controlling and coordinating these on a non-linear battlefield.

ENDNOTES

1. John Ruskin, The Oxford Dictionary of Quotations (New York: Oxford University Press, 1980), 411.
2. Joint Chiefs of Staff, Publication 3.0, Doctrine for Joint Publications (Washington, DC: Joint Chiefs of Staff, 1993), I-1.
3. Ibid., III-48.
4. Ibid.
5. Joint Chiefs of Staff, A Doctrinal Statement of Selected Joint Operational Concepts (Washington, DC: Joint Chiefs of Staff, 1992), 17.
6. This observation is based on numerous conferences I have attended that have discussed the FSCL. These include a briefing by COL Tackaberry, Deputy J-7 for Doctrine on 18 January 1994, a briefing by COL Long, Chief of Doctrine for the Air Component Command on 16 January, and the TRADOC Joint Doctrine Seminar held at Fort Leavenworth on 9 February 1994. Additionally, lessons learned from the Gulf War, articles by the various service chiefs, and an assortment of interviews with members of both service indicate that this "turf battle" is ongoing.
7. TRADOC Conference on Joint Doctrine headed by COL Rick Rowlett at Fort Leavenworth, Kansas on 9 February, 1994. This point was substantiated by the various representatives of the services who attended the conference.
8. Thomas Tait, "The Tait Report," Desert Shield/Desert Storm After Action Report, Washington, DC: Department of the Army, 1994. The views in this report are also substantiated in the Joint Universal Lessons Learned (JULLS) gathered from the war and other joint exercises. Based on these reports and the numerous conferences I have attended, the services were given the mission to resolve the FSCL issue with respect to joint fires.
9. David H. Zook, "The Fire Support Coordination Line: Is it Time to Reconsider our Doctrine?" (MMAS Thesis, U.S. Army Command and General Staff College, 1992), 35.
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12. Jonathan M. House, Towards Combined Arms Warfare: A Survey of Twentieth Century Tactics, Doctrine, and Organization, (Fort Leavenworth, KS: U.S. Army Command and General Staff College, 1984), 20.
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17. Russell F. Weigley, Eisenhower's Lieutenants: The Campaign for France and Germany 1944-1945, (Bloomington: Indiana University Press, 1981), 164.
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20. U.S. Army, Field Manual 6-20, Field Artillery Tactics and Techniques, (Washington, DC: Department of the Army, 1948), 95-97.
21. Ibid., 96.
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23. U.S. Army, Field Manual 6-20-1, Field Artillery Tactics, (Washington, DC: Department of the Army, 1965), 23.
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25. U.S. Army, Field Manual 6-20, Fire Support in Combined Arms Operations, (Washington, DC: Department of the Army, 1977), D-4.

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27. This definition was supplied by the Army, who was given the task by the JCS to draft this document.

28. JCS Pub 3.0. p. III-48.

29. Ibid.

30. Ibid.

31. Quote taken from retirement speech of Admiral David Jeremiah Vice Chairman of the Joint Chiefs of Staff. Quote was used in a speech given to the School of Advanced Military Studies by General Loh Commander of Air Combat Command (ACC) on 9 March 1994.

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33. Kenneth Graves, "Steel Rain - XVIII Airborne Corps Artillery in Desert Storm," Field Artillery, (Fort Sill, OK: Department of the Army, October, 1991, 55.

34. Buster C. Glosson "Civilians Didn't Change the Target List," Air Force Times 51, No 48, July 1991, 27.

35. The point on decreasing the corps commanders Area of Operations (AO) is based on a discussion with COL Les Brown, USA (Ret) who works as an analyst for the Battle Command Training Program (BCTP) at Fort Leavenworth. Col Brown bases his comments in his experience as a former DivArty Commander and by his seven years of experience with BCTP. The conversation occurred on 2 February 1994.

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53. Carl R. Pivarsky "Dangerous Doctrine," Military Review September, 1993, 48.
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58. Merrill Mc Peak, "TACAIR Missions and the FSCL," Air University Review, September-October, 1985, 68.
59. Buster C. Glosson "Civilians Didn't Change the Target List", Air Force Times 51, No 48, July 1991, 25.
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61. Hans Henning von Sandrart, "Considerations of the Battle in Depth," Military Review, October, 1987, 12.
62. John H. Cushman, Thoughts for Joint Commanders, (Annapolis, MD: U.S. Naval Academy Press, 1993), 40.
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64. Charles William Robinson, "Airland Battle Tactics: An Analysis of Doctrine and Experience," (SAMS Monograph, U.S. Army Command and General Staff College, 1993), Taken from the interview with General Frederick M. Franks, 43.
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66. Ibid., Volume III, Operational Fires p. III-2.
67. Joint Chiefs of Staff, Publication 3.0 Doctrine for Joint Operations, (Washington, DC: Joint Chiefs of Staff, 1993), III-48.
68. Taken from an interview conducted with LTC Robert Byrant on 27 February. LTC Byrant was assigned to CENTCOM headquarters working in the A2C2 cell.
69. Taken from extracts of the Tait Report headed by MG Thomas Tait who headed the special study group on the Desert Shield/Storm After Action Report from Volume III p. III-33.
70. Ibid., III-32.
71. Charles William Robinson, "Airland Battle Tactics: An Analysis of Doctrine and Experience," (Fort Leavenworth, KS: SAMS Monograph, 1993), 43. Taken from interview conducted with GEN Franks TRADOC Commander by Major Robinson.
72. Joint Universal Lessons Learned number 13912-96300 submitted by LTC Reese a/J-3 USCENTCOM on 9 March 1991.

73. Taken from extracts of the Tait Report conducted by MG Thomas Tait who headed a special study group on the Desert Shield/Storm After Action Report from Vol. IV, IV-2-5.

74. Taken from an interview conducted with Col Thomas Rourke USAF (Ret) on 2 February 1994.

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79. Taken from the TRADOC Joint Doctrine Seminar held at Fort Leavenworth on 9 February. This point is based on TRADOCs position on the concept of the joint deep fight.

80. Comments were taken from a conference on Joint Fire Support by the ACC at Langley AFB on 18 January head by Col Long Chief of ACC Doctrine.

81. Ibid., ACC Conference 18 January 1994.

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